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PERSONAL INFORMATION

Matteo Brachetta

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Sex Male | Date of birth 09/12/1990 | Nationality Italian

ACADEMIC POSITIONS

January 2022 – **January 2025** — **Assistant Professor** (i.e. RTD-A in Italian System) in Mathematics for Economics
Politecnico of Milan, Department of Mathematics

September 2020 – January 2022 — **Post-Doctoral Researcher**
Politecnico of Milan, Department of Mathematics

June 2020 – August 2020 — **Research fellowship**
University of Chieti-Pescara, Supervisor: Prof. Claudia Ceci

November 2019 – April 2020 — **Post-graduate research fellowship**
University of Chieti-Pescara, Supervisor: Prof. Claudia Ceci

EDUCATION AND TRAINING

November 2016 – October 2019 (Completion date: 24-04-2020) — **PhD** in "Business, Institutions, Markets"
Thesis: "Optimal Reinsurance and Investment for Stochastic Factor Risk Models" cum laude
Supervisor: Prof. Claudia Ceci
Department of Economics, University of Chieti-Pescara (Italy)

October 2018 – December 2018 — **PhD visiting** period at University of Cologne (Germany)
Supervisor: Prof. Hanspeter Schmidli

October 2016 – March 2017 — **Post-graduate Course of Higher Education in "Mathematical Finance"**, 30/30
University of Bologne (Italy)
Directors: Prof. Andrea Pascucci, Prof. Sergio Polidoro

2016 — **Advanced Course** in Economics and Techniques for bank management
University of Chieti-Pescara (Italy)

2014 – 2016 — **Master's degree in Economics**, 110/110 magna cum laude
Thesis: "Stochastic Control for Jump Diffusion Processes and Applications in Finance"
Supervisor: Prof. Claudia Ceci
University of Chieti-Pescara (Italy)

2011 – 2014 — **Bachelor's degree** in Economics
Thesis: "Mathematical foundations of financial markets modeling: the stochastic integral"
Supervisor: Prof. Cristina Caroli Costantini
University of Chieti-Pescara (Italy)

CONTRIBUTED TALKS

14/07/2021 — Invited talk at "Virtual seminar in Insubria & Bicocca" (Organizers: Prof. Emanuela Rosazza Gianin and Elisa Matrogiacomo); title: "Optimal Public Debt Management"

07/07/2021 — Speaker at 24th International Congress on Insurance: Mathematics and Economics (IME 2021), Virtual Congress; title: "Optimal reinsurance problem under fixed cost and exponential preferences"

14/04/2021	Invited talk at University of Chieti-Pescara (organizer: Prof. Claudia Ceci); title: "I principi di base della teoria del rischio: rischi assicurativi e calcolo dei premi"
17/04/2020	Invited talk at Politecnico of Milan (organizer: Prof. Emilio Barucci), title: "Stochastic Factor Risk Models and Optimal Reinsurance"
29-31/01/2020	Speaker at Quantitative Finance Workshop 2020, Napoli (Italy), title: "Optimal Reinsurance and Investment in a Diffusion Model"
09-11/09/2019	Speaker at 43rd Annual Meeting of the AMASES, Perugia (Italy), title: "Optimal Reinsurance and Investment in a Diffusion Model" **Winner of the AMASES Award for the best paper presented by a young researcher**
10-13/07/2019	Speaker at 23rd International Congress on Insurance: Mathematics and Economics (IME 2019), Munich (Germany), title: "Optimal Reinsurance and Investment in a Diffusion Model"
23-25/01/2019	Poster presentation at Quantitative Finance Workshop 2019, Zurich (Switzerland), title: "Optimal excess-of-loss reinsurance for stochastic factor risk models"
09/11/2018	Invited talk at University of Bielefeld (organizer: Prof. Giorgio Ferrari), title: "Optimal reinsurance and investment problem for stochastic factor models"
18/10/2018	Invited talk at University of Cologne (organizer: Prof. Hanspeter Schmidli), title: "Optimal reinsurance and investment problem for stochastic factor models"
13-15/09/2018	Speaker at 42nd Annual Meeting of the AMASES, Napoli (Italy), title: "Optimal reinsurance and investment problem for stochastic factor models"
24-26/01/2018	Speaker at Quantitative Finance Workshop 2018, Roma (Italy), title: "Optimal reinsurance and investment problem for stochastic factor models"

ATTENDED CONFERENCES/SCHOOLS

08/07/2021	Chair at 24th International Congress on Insurance: Mathematics and Economics (IME 2021), Virtual Congress. Session "Ruin Theory and Its Applications"
10-11/06/2021	Discussant at "Big Data and Machine Learning in Finance Conference", Online Conference organized by Politecnico of Milan.
22-27/07/2018	Summer School "Complexity and Emergence: ideas, methods, with a special attention to economics and finance", Como (Italy)
18-21/12/2017	Verona Paris Stochastic Modeling Semester - Opening Conference
02-08/07/2017	21st International Congress on Insurance: Mathematics and Economics (IME 2017), Vienna (Austria)
28/04/2017	First Edition of Qfin@work, Roma (Italy)

PUBLICATIONS

2021	Brachetta, M. and Ceci, C. "*Optimal reinsurance problem under fixed cost and exponential preferences*". 2021, Mathematics, 9(4).
2020	Brachetta, M. and Ceci, C. "*A BSDE-based approach for the optimal reinsurance problem under partial information*". 2020, Insurance: Mathematics and Economics, 95:1-16.
2019	Brachetta, M. and Schmidli, H. "*Optimal Reinsurance and Investment in a Diffusion Model*". 2019, Decisions in Economics and Finance. 8:1 – 21.
2019	Brachetta, M. and Ceci, C. "*Optimal proportional reinsurance and investment for stochastic factor models*". 2019, Insurance: Mathematics and Economics, 87:15 – 33.

2019 Brachetta, M. and Ceci, C. “*Optimal excess-of-loss reinsurance for stochastic factor risk models*”. 2019, Risks, 7(2).

JOURNALS COLLABORATIONS

Editorial activity — **Co-Guest Editor** of the Special Issue "Stochastic Optimization Methods in Economics, Finance and Insurance" on Mathematics (https://www.mdpi.com/journal/mathematics), Guest Editor: Prof. Claudia Ceci.

Journals reviewing

- 2022-today: North American Journal of Economics and Finance (NAJEF)
- 2021-today: Annals of Operations Research (ANOR)
- 2021-today: Journal of Industrial and Management Optimization (JIMO)
- 2021-today: Open Mathematics
- 2020-today: Mathematics (MDPI)
- 2020-today: Journal of Computational and Applied Mathematics (JCAM).
- 2019-today: European Journal of Operational Research (EJOR).

TEACHING ACTIVITY

2021 Mathematical Finance II (exercise classes: 26 hours), Politecnico of Milan, Professor Carlo Sgarra.

2021 Advanced Mathematical Models In Finance (exercises classes: 20 hours), Politecnico of Milan, Professor Emilio Barucci.

2020 Mathematical Finance II (exercise classes: 40 hours), Politecnico of Milan, Professor Carlo Sgarra.

2020 Probability Theory Workshop, 12 hours, PCTO (Percorsi per le Competenze Trasversali e l'Orientamento), University of Chieti-Pescara.

2019 Master thesis supervising at University of Chieti-Pescara.

2019 Mathematical modeling for investment decisions, 20 hours, Master degree in Economics and Finance, University of Chieti-Pescara.

2018 Introduction to Probability Theory (within Course in Econometrics), 6 hours, Bachelor degree in Economics, University of Chieti-Pescara.

2018 Probability Theory Workshop, 12 hours, ASL (Alternanza Scuola-Lavoro), University of Chieti-Pescara.

AWARDS AND FUNDED PROJECTS

2020 Funded INdAM – GNAMPA Project 2020 on “A class of optimization problems in actuarial and economics science” (“Una classe di problemi di ottimizzazione in ambito attuariale ed economico”), Organizer: Prof. Claudia Ceci.

2019 Funded INdAM – GNAMPA Project 2019 on “Stochastic control problems with partial information in infinite dimensions” (“Problemi di controllo ottimo stocastico con osservazione parziale in dimensione infinita”), Organizer: Alessandro Calvia.

2019 **AMASES Award for the best paper presented by a young researcher** in 2019

ADDITIONAL INFORMATION

Memberships — Member of the Gruppo Nazionale per l’Analisi Matematica, la Probabilità e le loro Applicazioni (GNAMPA) of the Istituto Nazionale di Alta Matematica (IndAM) from 2018 to 2020.

Member of the AMASES (Association for Mathematics Applied to Economics and Social Sciences) since 2018.

Research interests — Stochastic control problems in economics, finance and actuarial science, public debt management, insurance, economic modelling.

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.”

Milan, 02/02/2022